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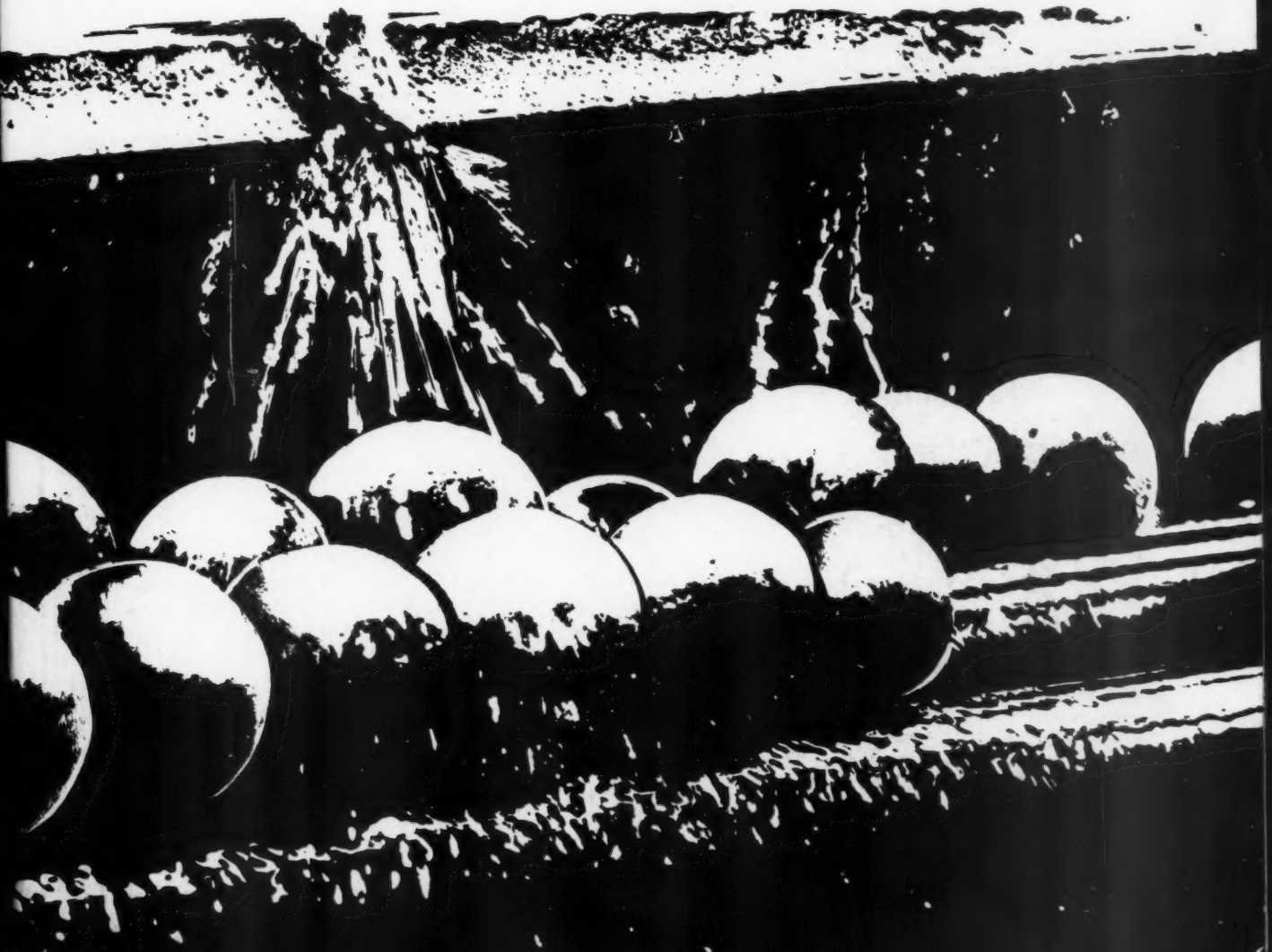
# agricultural marketing

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washing oranges



# Concentrating on ORANGES

...when there's a freeze in the air

By Frank W. Betz

**A**H, THE SCENT OF orange blossoms, the balmy air . . . the nights turn cool, the green fruit turns orange . . . and all is well in the orange grove.

But what a change of scene if the temperature drops!

Ugh, the smell of smudge pots, the frigid air! The nights are freezing and there's danger of damage to the fruit!

What does an orange that has been frozen look like? It may still look pretty on the outside, but inside there may be some mushiness or dryness. But if only a small part of it has frozen, an orange is still juicy and good to eat.

Orange packers and shippers in Florida, California, Texas, and Arizona take special precautions after a freeze to see that only good juicy fruits reach consumers. Fruit damage is assessed in the groves and strict quality control measures are enforced during packing.

After a freeze, many packers use mechanical separators to sort out damaged fruit. The separators are machines in which the oranges are dumped into water or emulsion. Separation is based on the fact that freeze-damaged fruit is lighter than sound fruit.

In Florida and Texas (whether there's a freeze or not), all oranges are inspected for quality during packing by the Federal-State Inspection Service. The Service is administered by the U.S. Department of Agriculture's Consumer and Marketing Service in cooperation with State agencies. Use of the inspection service is usually voluntary, but it is required under terms of the Federal marketing orders established by Florida and Texas growers and packers.

When a severe freeze occurs in Florida, the Florida Department of Citrus (formerly the Florida Citrus Commission) may declare an embargo on orange shipments for a specified period. This allows time to assess damage and ensure that no frozen fruit is shipped, because it takes a while for frost damage to appear in the fruit.

Then, when packing and shipping of oranges begins again, inspectors are particularly watchful for freezing injury.

After the fruit has been delivered to the packinghouse, it is washed, waxed, polished, and sorted into quality grades and sizes by plant workers.

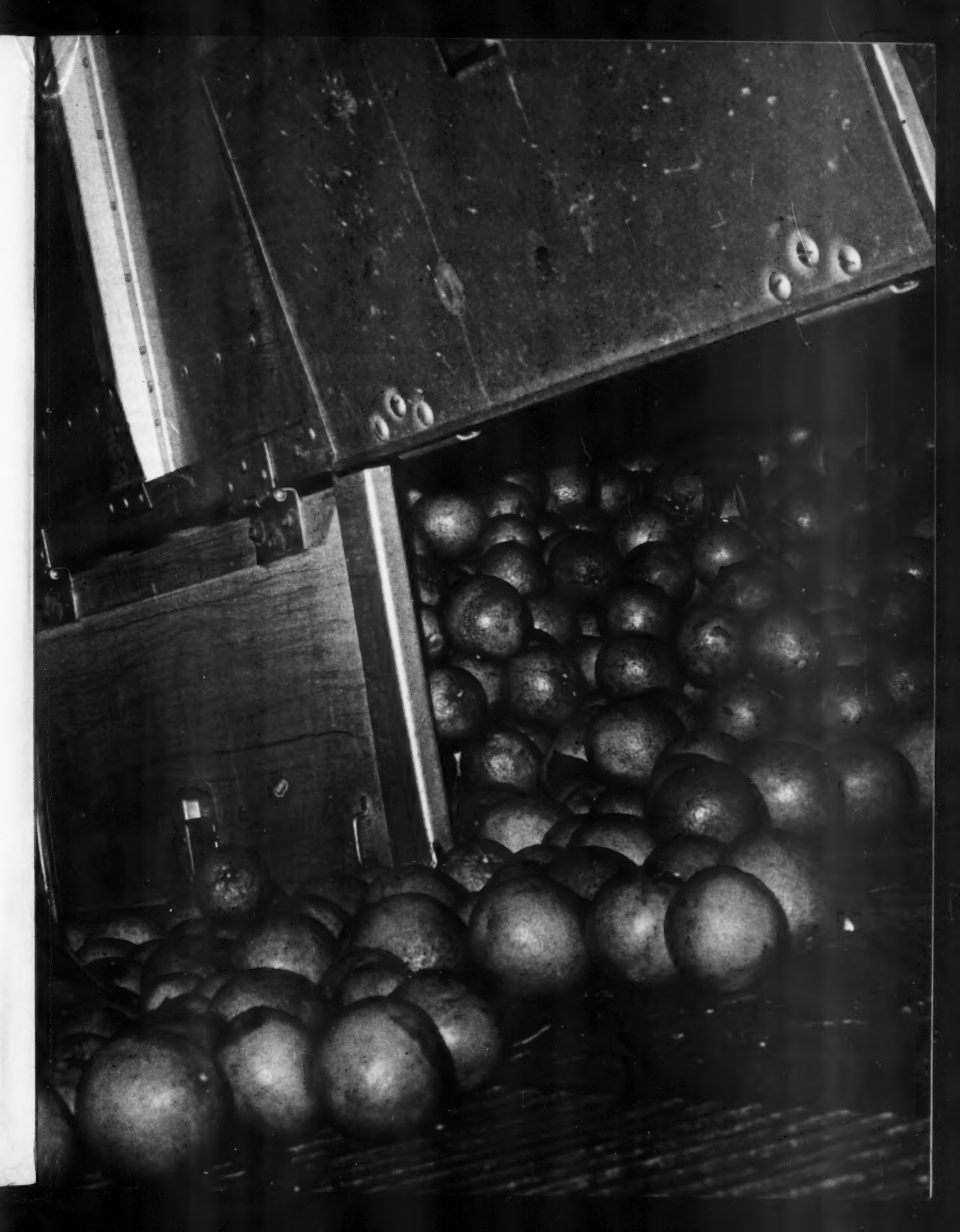
The inspector then takes samples

of fruit from each bin of sorted oranges. He first tests the fruit to see that it meets maturity requirements. The State of Florida will not permit shipment of oranges not of the proper maturity. He next checks the oranges to see if they meet grade standards for shape, firmness, texture, size, color, and absence of external defects such as scars and discoloration. He also cuts open samples of the fruits to check for mushiness or dryness.

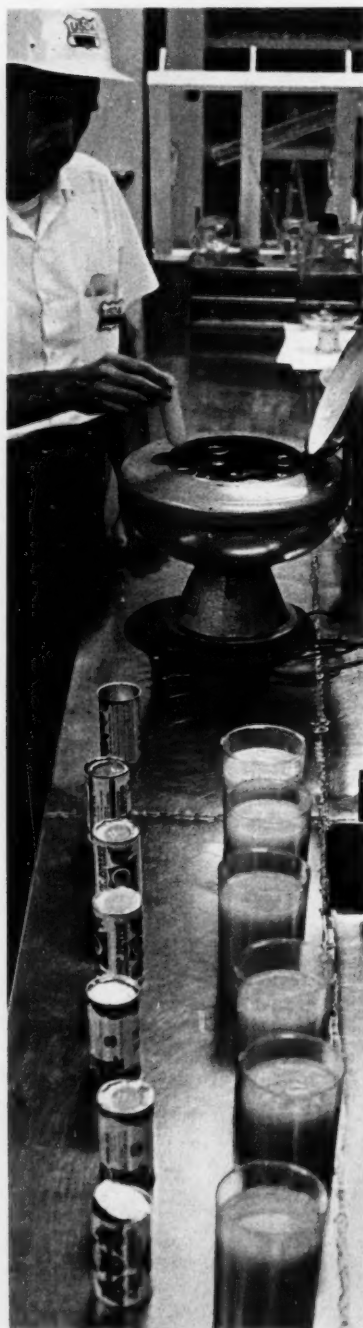
When oranges meet quality requirements, the grade is then certified by the inspector. With quality control charts developed by C&MS's Fruit and Vegetable Division, the packer can check sorting of oranges while the fruit is still on the packing line and make any corrections needed to bring the pack up to the desired level of quality.

When do you see these oranges? They're the ones you may find in your supermarket, in 5 or 8 pound bags, labeled U.S. No. 1. □

*The author is Assistant Head, Standardization Section, Fresh Products Standardization and Inspection Branch, Fruit and Vegetable Division, C&MS, USDA.*



To determine the pulp content of frozen concentrated orange juice, the USDA inspector puts a sample in a centrifuge.



## ...for better juice in the morning

By Fred Dunn

**T**AKE AN AVERAGE-size Florida orange. Squeeze it, and see how much juice you get.

With that amount known, how many oranges do you think it takes to make one 6-ounce can of frozen concentrated orange juice?

Seven? Eight?

You're right both times.

The amount of oranges used in making Florida's frozen concentrated orange juice can vary from year to year. But you won't notice any difference in the taste of the juice.

Uniform good quality and taste is maintained each year by careful testing and blending of the juice from tons of oranges harvested from many different groves.

Some orange varieties are sweeter than others; some oranges have a higher ratio of sweetness to acid, and some oranges are juicier than others.

But most frozen concentrated orange juice made in Florida is U.S. Grade A quality, and Grade A has specific requirements for flavor, color, and other factors. So it may take a different amount of oranges each season to meet the requirements of U.S. Grade A and the additional requirements of the Florida Citrus Code.

The U.S. Department of Agriculture's Consumer and Marketing Service works closely with the Florida Department of Citrus (formerly the Florida Citrus Commission) and with processors to help bring consumers high-quality frozen concentrated orange juice.

Quality control begins when a trailerload of oranges reaches the processing plant. Inspectors with the Federal-State Inspection Service—which is administered by C&MS in cooperation with State agencies—examine the oranges before they are made into juice.

Tests made by these inspectors tell the processor the degree of sweetness of the oranges, the ratio of sweetness to acid, and the approximate amount of juice that can be obtained from them. These tests also provide the basis for the processor's payment to the grower for each load.

Once processing begins, C&MS inspectors who specialize in processed fruits and vegetables take over. These inspectors check the entire manufacturing process to see that good commercial practices are used, that the plant is operated under sanitary conditions, and that the juice measures up to the quality desired. All frozen concentrated orange juice made in Florida is processed under USDA inspection.

Processing begins with thorough washing of the oranges and a sorting to remove any defective fruit. The inspector checks both these operations to make sure only clean, good fruit is used to make juice.

Next step—the juice extracting machines, which make quick work of the squeezing process. Juice flows from these machines to equipment that removes seeds and coarse pulp, and then into blending tanks.

Here the inspector tests the juice in each tank for its degree of sweetness and the ratio of sweetness to acid. These are the two most important factors in the flavor of the juice—and the main reasons, in addition to juice content, for variation in the number of oranges used. The juice in these tanks is skillfully blended to obtain the desired flavor.



Now the juice is ready for concentration. This is done in specially designed evaporators, in which the juice flows or falls in a thin layer, under vacuum, through a slightly heated atmosphere. Water in the juice vaporizes and evaporation is continued until the juice reaches a high sugar solids concentration.

More tests come next. The concentrated juice is ready to be filled into cans, but both the processor and the inspector want to make sure it's up to standards before filling begins.

At this point, last-minute adjustments are made to standardize the sweetness, flavor, and color. This is usually done by adding specially prepared fresh juice, containing fruit cells, and flavor-carrying orange oils which are saved when the juice is squeezed from the oranges. High-quality concentrate and captured flavor essences may also be added.

In addition to testing for sweetness and acid content, the inspector checks the concentrated juice for such defects as small pieces of seed, or specks that may occur if the juice was overheated during evaporation. Finally, the inspector reconstitutes the juice, and checks its color and flavor.

The processing and testing of Florida's frozen concentrated orange juice still isn't complete, however. After the juice is filled into cans and frozen, the inspector again makes these tests, and more, on the finished product.

He checks the fill of the containers, to be sure they contain the 6 ounces or 12 ounces listed on the label. Other tests tell if the juice is processed properly and will reconstitute without jelling or separating.

Frozen orange juice that has been processed under continuous USDA inspection and meets the standards for U.S. Grade A juice may carry the USDA grade shield of quality.

Is all this work necessary? Yes. Good raw material, good manufacturing practices, and good quality control are essential to producing high-quality frozen concentrated orange juice. □

*The author is Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, C&MS, USDA.*

*Checking the degree of sweetness of the juice: Here the USDA inspector takes a reading through a refractometer.*



## ...for a bright frozen futures market

By Edward R. Thompson

**T**HE FUTURES MARKET for frozen concentrated orange juice, begun in 1966, is a relative newcomer in trading in commodity futures. But in just four years, it has become an integral part of the marketing mechanism for Florida orange products.

Standardization specialists and fruit and vegetable inspectors with the U.S. Department of Agriculture have had an important part in setting quality standards and certifying the quality of orange juice traded on the futures market since this market began.

(Frozen concentrated orange juice traded on the futures market is more highly concentrated than the frozen juice available to consumers. It may be used in manufacture of orange drinks, reconstituted orange juice, and baked goods, as well as in production of the frozen concentrate sold at retail.)

What's the purpose of trading in commodity futures? It's an intricate business, but principally it provides a means of minimizing the risks of owning, acquiring, storing, manufacturing, and merchandising products which are subject to wide swings in market price, from month to month and season to season. This is accomplished by contracting to buy or sell a product at a specified future time and at a definite price.

This procedure in market parlance is known as "hedging"—a "selling hedge" protects the value of a product already owned, and a "buying hedge" protects against increased costs of a product not yet acquired.

Such hedging is possible only because speculators are willing to assume the risks of change in market prices in the hope of making a profit. Without such speculative trading, there would be no broad and active market in which to buy or sell risk-reducing futures contracts.

A futures contract in concentrated orange juice is a firm commitment to deliver or receive a specified quantity of a specific quality of concentrate during a designated month, at a price determined by open auction on the futures exchange.

By the rules of the Citrus Associates of the New York Cotton Exchange, Inc., a futures contract for frozen orange concentrate is a unit of 15,000 pounds of soluble orange solids, packed in 55-gallon steel drums. Each 15,000 pound contract may have a cash value of from \$5,000 to \$10,000 or more, depending on the current price.

Since the oranges involved in such trading may be still on the trees, or the concentrate may still have to be acquired by the seller, an understanding of the quality and other characteristics of the concentrate must be had before meaningful trading can take place. It is in this field that the Fruit and Vegetable Division of USDA's Consumer and Marketing Service makes its contribution to this important market.

The minimum quality is specified in terms of the U.S. Standards for Grades of Concentrated Orange Juice for Manufacturing, with certain modifications. Specifically, it must be U.S. Grade A for Manufacturing with special requirements for color, flavor, oil, and other factors. The Brix—an index of concentration—must be 51° to 65° and the ratio of Brix to acidity must be 13-19.5 to 1.

The quality specified in the contract, however, is only the target for future production or delivery. When the delivery month arrives, there must be tangible evidence that the product exists and is of the specified quality and condition.

A warehouse receipt for the concentrate, supported by a USDA inspection certificate of compliance with the quality standards, is required to complete a transaction.

USDA inspectors examine all frozen concentrate traded on the futures market. Extremely accurate quality grading is necessary.

Attributes not precisely measurable by chemical or physical means, such as flavor, are graded by a highly trained panel.

Concentrate that meets inspection requirements is of high quality—that's one thing that's certain in the ups and downs of the frozen concentrated orange juice market. □

*The author is Assistant Head, Standardization Section, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, C&MS, USDA.*



Buyers and sellers trade daily at the orange juice futures exchange.



By David Patton

**A** SWEET TOOTH is a trait common to modern and ancient man alike. Candymakers, catering to the age-old craving for "something sweet," were pictured on Egyptian tombs as far back as 3500 B.C. Since the early Egyptians had no sugar, they made their candy by mixing dough and then sweetening it with honey and dates.

Today, dates, which are high in natural sugar, are still a delicious remedy for a case of "sweet tooth." Americans eat some 43 million pounds of whole dates a year, and another 15 million pounds are consumed in such products as cookies and the nostalgic favorite, date-nut roll.

Virtually all domestic dates and all imported dates are inspected for quality by the U.S. Department of Agriculture's Consumer and Marketing Service.

Most domestic dates are grown in the arid heat of Southern California's Imperial Valley, and a few in Arizona.

A Federal marketing order supported by growers and packers sets minimum standards of quality for California dates, and requires that all such domestic dates—with the exception of small local sales—be

inspected before they are sold. This quality control helps the packer market his dates by limiting sales of whole and pitted dates to only the better qualities. It also lets the buyer know what he is getting.

Inspection of California dates takes place at the packing plant, where the dates are cleaned, sorted into quality grades, and packaged. Packing operations begin as soon after harvest as possible.

Dates are picked from graceful 60-foot-tall date palms. Mechanization, new to date picking, has replaced the former, strictly hand-and-ladder operation. Long, hydraulic-operated booms, with large, wire baskets, are mounted on trucks—similar to those used for telephone line repair.

The worker is lifted to the top of the date palm, where he cuts the entire bunch, which then drops into the basket. When the basket is lowered to the ground, the dates are shaken from the bunch by another machine, caught in large bins, and taken to the packing plant.

At the plant the dates are thoroughly washed and sorted for size and quality. Dates that are too dry are hydrated—given a short soak in room-temperature water to plump

them up. Dates to be sold in pitted form go through high-speed machines, capable of pitting 8,000 pounds per hour.

At the larger plants, an inspector with C&MS's Fruit and Vegetable Division monitors the entire sorting and packing operation. After the dates are packaged, the inspector checks once again, and if the dates meet the quality standards, a USDA certificate of quality is issued.

At smaller plants the inspector may not be on hand to observe all the operations. But after packing is completed, he draws a prescribed number of containers from a lot, and examines and certifies the dates in the same manner.

Under the requirements of the marketing order, imported dates for retail packaging must meet quality standards comparable to those for California dates. The imports usually arrive at New York City or Savannah, Ga.

Inspectors take samples from each lot at the dock and examine them in a USDA laboratory. Once the inspectors clear a shipment for wholesomeness and certify its quality, they notify U.S. Customs and the importers, so the dates may be released and moved from the piers to private warehouses or packing plants.

Dates are the kind of sweet that can work their way into your menu, either combined with other foods or as a snack right from the package.

Date-nut bread, fruit cake, and date candies are always popular at holiday time. But dates are a versatile year-round menu mate. They blend well in breads, pies, cakes, and other desserts. They make a nice accent in stuffing for meats or poultry—and they form a fine duo with cottage cheese for a luncheon salad.

The uses for dates can be as wide as the imagination of the culinary artist within you. A tempting snack is a date shake, made by combining you-know-what with milk and vanilla ice cream. □

*The author is Head, Inspection Section, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Div., C&MS, USDA.*

# she's their food teacher!



**T**O MOST PEOPLE in town, she's Mrs. Sharon Mahoney, but to the school kids she's "the food teacher." That's the affectionate name they have given Sharon, as she is the nutrition education teacher of the Bartholomew Consolidated School Corporation in Columbus, Indiana.

Located 40 miles southeast of Indianapolis, Columbus is a progressive community of 30,000 per-





sons. In keeping with its philosophy of concern, it placed school food service into an educational role by creating a special nutrition education plan for its children.

"A knowledge of good nutrition is essential to everyone's well-being," Sharon points out. "The objectives of our program are to help children understand good nutrition, understand the foods of other cultures, develop a curiosity about foods, improve the behavior of pupils in the school cafeteria, and to promote good health habits and manners.

"With this approach, we hope to provide better education plus better nutrition," she explains.

The program presently centers on the elementary grades, beginning with the kindergarten children who are introduced to the cafeteria and their first school lunch.

First graders are taught to identify various fruits and vegetables and their nutritional importance.

In second grade the children taste typical foods from the countries they are studying in social science and learn how the foods fit into each country's culture.

Third graders view a demonstration on how to churn butter, help make yeast bread, and taste-test both.

Fourth graders have a chance to prepare and eat a pumpkin pie in a lesson which interrelates several subjects: math—measuring of ingredients and cost of foods; art—making their own Hallowe'en or Thanksgiving place mats and name cards; history—studying how pioneers used pumpkins; science—studying the pumpkin plant; and health—learning about cleanliness in cooking and the ways our body uses pumpkin.

Fifth graders learn the importance of proper table manners by eating at a "manners table" during a school lunch period.

Carefully planned luncheons and dinners—such as Hawaiian luaus and Mexican fiestas—prove to be great hits with the sixth graders, as they discover the foods of other cultures which they are studying.

Each teacher is made aware of Sharon's capabilities and requests her participation for maximum effect. The teacher is depended upon

to help lay a foundation for her presentation. Lessons are taught both in the classroom and in the school cafeteria, where food service personnel and facilities can be used.

Whenever possible, Sharon stresses the importance of the school food service system. She emphasizes particularly that the children should taste every food served, not only for its nutritional value, but also for an appreciation of the effort made in preparing it. This helps introduce them to a wide range of foods and highlights the contribution of the food service workers.

However, with 25 schools in the Bartholomew system and only one "food teacher," Sharon's efforts are spread thin. During the 1968-69 school year, she worked in six elementary schools, and this year she is in six different ones.

"The schools don't want Sharon to move on so quickly," says Harriet Baker, school food service director, who is Sharon's immediate supervisor and originator of the nutrition education program. "Once they see the value of this training, they hate to see it stopped."

With this in mind, the school administration is planning for the future. "We want to establish a program that begins in kindergarten and develops progressively through the child's senior year in high school," Mrs. Baker says. "This would require three nutritionists operating the program full-time in six or seven elementary schools. The already established home economics and health curriculum in the junior and senior high schools would carry on the job."

"We would hope to involve the children's parents more in the program. We already know the children are carrying some of this training home, as parents have told us their children now eat spinach or request certain recipes. Some children even help their parents by teaching younger brothers and sisters some of the food habits they have learned through our program."

School food service has taken on a new meaning in Columbus. One child put it this way after one of Sharon's presentations: "I didn't know food could be so much fun." □



## Food Stamp News Travels Fast

**W**HAT HAPPENED RECENTLY in Ben Hill County, Georgia, is making big news in the drive to end hunger.

In one day the County's welfare department processed 13 new applications for food stamps. They usually averaged 25 per month.

The surge in applications illustrates the fact that Americans are recognizing the greater benefits that have recently been built into the U.S. Department of Agriculture's Food Stamp Program.

Georgia is only one of the States across the Nation where food stamp customers, new and old, are enjoying the benefits of more food stamp coupons for less money. Missouri is another.

Program participation in St. Louis increased by about 7.4 percent during the first month of the more-for-less modifications. The total value of food coupons issued increased by over 40 percent. And the total value of bonus stamps given to participants increased by more than 98 percent. Moreover, the average value of bonus coupons rose from \$7.50 to \$13.84 per person, costing the participants some 12 percent less for their food stamp allotments.

In Cheyenne, Wyoming, a 77-year-old woman who had always prided herself on her resourceful-

ness, decided the new issuance scales were too good to pass up. She applied for food stamps for the first time after getting along without other help on a \$107 a month pension.

In Caroline County, Maryland, a reporter had this to say: "I was very surprised at the percentage increase that the recipients received. The bonus stamps issued came to \$12.87 per person compared to slightly more than \$7.96 under the old tables. But that isn't all.

"Most of the people coming into the office were shocked when told of the new tables. In fact, some of their expressions could have been called hilarious, had the situations not been so serious. They just could not realize that they were going to pay less and receive more." The good news about the food stamp modifications traveled quickly. In Atlantic County, N.J., for example, food stamp offices were literally swamped with applications—many from former participants who were reapplying and who named the new scales as their reason.

How did they find out the good news? Food stamp workers attribute the fast spread to participants themselves who are rapidly converting eligible friends and neighbors who had not been participating. □



## Plentiful Foods for May

**T**HE MERRY MONTH of May offers consumers a choice of numerous popular foods, according to the U.S. Department of Agriculture's Plentiful Foods List.

Canned tomato products are featured. Other plentifuls include milk and dairy products, eggs, canned green beans, canned fruit cocktail, canned and frozen sweet corn, canned applesauce and dry split peas.

USDA's Consumer and Marketing Service notes that further price reductions for tomato products—especially tomato paste, puree and ketchup—reflect heavy inventories resulting from unusually large packs in the past two years.

In May, the output of milk and dairy products will be near its peak, and egg production is expected to be above a year ago. □

## Trial Favors Macaroni

**"T**HE JURY IS BACK and the verdict is in."

Late last summer the U.S. Department of Agriculture asked needy persons in San Diego County, California, in St. Louis County, Missouri, and in four boroughs of New York City (Bronx, Manhattan, Staten Island, and Queens), to serve as judge and jury in a special testing program, for enriched macaroni.

USDA's Food and Nutrition Service developed questionnaires to tabulate the participant's reaction to the enriched macaroni. Interviews were conducted in the Counties distributing commodities in the test areas.

In addition to the questionnaires, FNS developed a flyer describing the nutritive values of the macaroni and recipes on how to cook it.

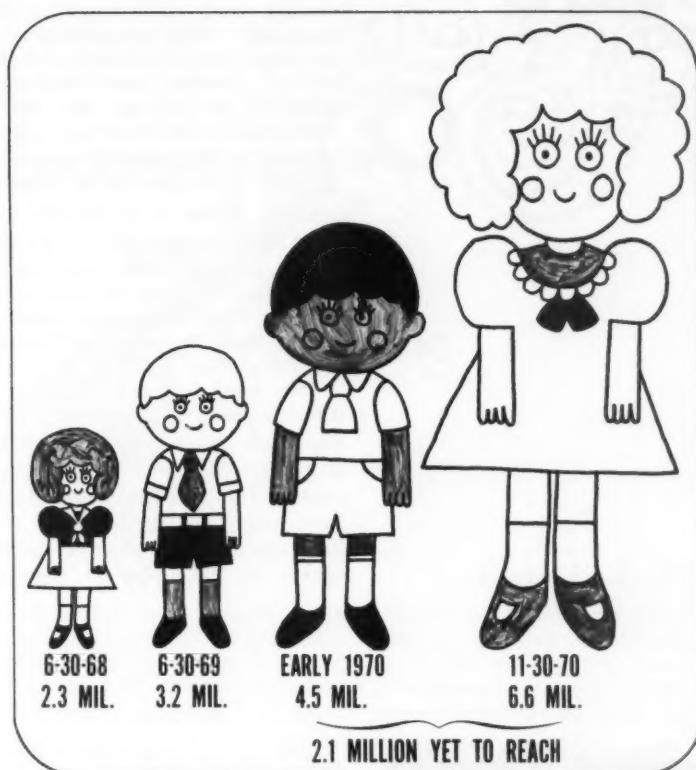
Milk macaroni and wheat-soy macaroni were distributed in the test. They are similar in cooking quality to the macaroni available in grocery stores and are prepared in the same way.

In San Diego County the Cooperative Extension Service program aides provided "show-taste-tell" demonstrations of the macaroni at several of the distribution centers.

Results showed that in each of the test areas over 97 percent of the participants interviewed wanted to continue getting the macaroni. Thus in April, USDA added this nutritious food to the current list of foods distributed under the Commodity Distribution Program.

The macaroni—enriched with thiamine, riboflavin, niacin, calcium, and iron—is a good source of vitamins and minerals. Like other grain products distributed to needy persons—enriched rolled oats, wheat, rice, grits, cornmeal—macaroni is tasty and easy to prepare.

Based on the recommended rate of use, one pound of enriched macaroni per person per month, USDA will distribute approximately 3.3 million pounds each month through the needy family program. □



## the goal...to feed needy kids!

**T**HIS YEAR MORE children than ever before from low-income homes are getting a lunch and/or breakfast at school. The U.S. Department of Agriculture's Food and Nutrition Service has set a goal of reaching 6.6 million needy youngsters with free or reduced-price meals at school by Thanksgiving. An FNS count in early 1970 showed that over 4 million needy youngsters were receiving free or reduced-price meals at school. The remaining youngsters should be eating their free or near free meals at school by the deadline next fall.

This action is part of the overall plan to eliminate poverty-related hunger and malnutrition in this

country.

A survey by USDA's Economic Research Service released last December showed that during 1968 availability of food service ranged from 61 percent of schools in the Northeast to 95 percent in the Southeast.

The survey indicated that at least 80 percent of the schools with over 500 enrolled had food service, compared with 55 percent of schools with less than 250 pupils. Lunch services were more generally available in junior and senior high schools than in elementary schools. Ninety-two percent of all schools with lunch services participated in USDA's National School Lunch Program. □

## schools may contract for food



**S**CHOOLS AND NONSCHOOL feeding programs under USDA's Child Nutrition Act may now use commercial food service management companies. The commercial firms may negotiate with schools and other federally assisted child feeding institutions to manage and operate their complete food service program.

Assistant Secretary of Agriculture Richard E. Lyng said in announcing the change in regulation: "We hope to encourage food service companies to find innovative ways to get meals into inner city schools that lack cafeterias and to get meals to rural schools that lack facilities and transportation.

"We hope to reach as many additional needy children as possible. President Nixon and the delegates to the recent White House Conference on Food, Nutrition and Health, have urged action to make these programs a more effective delivery system in the drive to eliminate

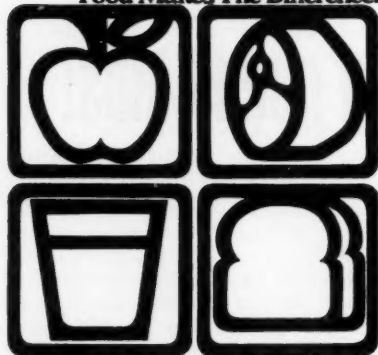
poverty-related hunger and malnutrition in this country."

USDA's Food and Nutrition Service child feeding programs affected by these amendments include the National School Lunch Program, Special Milk Program, School Breakfast Program, and the Special Food Service Program for Children.

The amendments require that when local schools or institutions contract for the operation of their food service by food service management companies, such contracts must include provisions for the company to keep program operation books and records. This enables the school or institutions to meet its program responsibilities and to have the records available for inspection and audit purposes.

In addition, the contract must include provision that federally donated commodities are used only for the benefit of the school or institution's feeding operation. □

### Food Makes The Difference!



## food makes the difference

**M**ENU AND SHOPPING ideas are featured in two new leaflets to help low-income families get more nutritionally adequate diets under food assistance programs. The U.S. Department of Agriculture has issued the leaflets as part of its Food Makes the Difference Campaign.

*Ideas for Economy-Minded Families*, PA-934, is for families taking part in the Food Stamp Program.

*Ideas for Families Using Donated Foods*, PA-935, will help families make the best use of the foods distributed to them through the Commodity Distribution Program.

Each leaflet offers suggestions for a week's menu, plus a sample shopping list, for a family of four and a family of six. These suggestions are based on USDA's "economy food plan"—its least expensive plan. Since early 1970, the Food Stamp Program has been providing participating families with enough stamps to pay for this economy-level diet.

Amounts of food needed for adequate diets for all family members are further spelled out in a separate teaching guide—*Ideas for Leaders Working with Economy-Minded Families*, PA-937—for use with the two leaflets.

Here is a sample of a nutritious and cost-saving menu for one day suggested in *Ideas for Economy-Minded Families*:

### Morning

Oranges, quartered

Pancakes

Sirup

Milk for children

### Noon

Cheese sandwiches

Raw carrot

Graham crackers

Milk

### Evening

Oven fried fish fillet

Mashed potatoes Cole Slaw

Cornbread Margarine

Apple pie

Milk for children

Copies of all three publications are available free to teachers, community leaders, and families participating in USDA family food programs. **Write:** Food and Nutrition Service Information Office, U.S. Department of Agriculture, Washington, D.C. 20250. Please specify the name and number of the publications needed. □



**F**ROM THE WHEAT FIELDS of the prairie States—from the corn fields of the great mid-west—from the rice fields of the South—from almost every State in this Nation, grains and related products pour forth by the millions of tons each year.

They are bought and sold across a continent that spans 3,000 miles and exported in huge quantities to buyers beyond our shores.

In most of this trade, the buyer never sees the product before it is delivered. These transactions are based on the quality grade standards and contract specifications established by the U.S. Department of Agriculture.

This is made possible by a nationwide grain inspection and grading service which provides dependable and uniform application of these Federal standards and specifications.

But only through the cooperation of State and other agencies could USDA carry out an operation of this scope and magnitude.

State and local agencies and trade organizations have teamed up with USDA through some 200 cooperative arrangements to inspect the quality of wheat, corn, barley, rye, oats, grain sorghums, flaxseed, soybeans, rice, dry beans and peas, lentils, hay, hops, and a number of related and processed grain products.

The Grain Division of USDA's Consumer and Marketing Service administers these cooperative arrangements under the U.S. Grain Standards Act and the Agricultural Marketing Act of 1946. These arrangements make official inspection services available in almost every State, in Puerto Rico, and also in Canada.

Such services have become a fixed part of our agricultural economy and they are just about taken for granted. But it was not always so.

Time was when individual States—and even different localities within States—had their own grade standards and inspection services. But as our interstate and foreign commerce

grew, it became nearly impossible for buyers and sellers to correlate the conflicting trade terms and practices.

In an attempt to remedy this situation, Congress passed the U.S. Grain Standards Act of 1916, which required the use of Federal standards when grain was sold by grade in interstate commerce. Other laws followed, giving USDA broad authority to develop and establish grade standards for all farm products and to provide official grading and inspection services for their impartial and uniform application.

Most of the USDA grading and inspection services developed over the years have involved cooperative arrangements with the States—usually State departments of agriculture.

These arrangements vary with the State and with the commodity, but all require the use of Federal grades and specifications, understood and accepted across the country, and supervision by USDA to assure uniform national application.

Under the U.S. Grain Standards Act, all original sampling and inspection of the covered grains, including wheat, corn, soybeans, barley, and oats, is handled by State, local, or trade organization employees licensed and supervised by the C&MS Grain Division.



By Howard H. Woodworth

Last year, 700 of these licensed inspectors, working in 400 locations across the country, performed some 2.5 million official inspections—certifying the quality of more than 170 million tons of grain.

Also under provisions of the Grain Standards Act, employees of the Canadian Department of Agriculture are licensed to sample U.S. grain being exported from ports in Canada. C&MS employees, stationed in Canada, perform the inspections.

Inspection of grains and related products not covered by the Grain Standards Act is provided under Federal-State agreements authorized by the Agricultural Marketing Act. Either USDA or State employees perform the inspections. Last year, under these agreements, there were more than 60,000 inspections of rice, dry beans and peas, lentils, and other related and processed grain products.

Federal-State cooperation?

It would be hard to find a better example than these cooperative programs that make possible the orderly marketing of this Nation's bountiful production of food and feed grains and other related commodities. □

*The author is Acting Director, Grain Division, C&MS, USDA.*

## joint forces combat unfit meat and poultry!

By L. L. Gast

**A** MORE POTENT LINE of defense against unfit meat and poultry is emerging in California, in what could be a model of Federal-State cooperation to protect consumers.

Under a joint "work plan" agreed on by the U.S. Department of Agriculture and the California Department of Agriculture in February 1970, the two agencies are integrating their compliance and evaluation programs to give consumers maximum protection against unwholesome, adulterated, and deceptively labeled meat and poultry products.

At the heart of the plan are improved communications between Federal and State personnel and elimination of duplicate efforts.

The compliance activity comes into play after products leave the plants where they are processed. The aim is to prevent fraudulent or illegal practices in marketing channels—practices that in-plant inspectors, who serve as a "first line of defense" against unfit products, have no control over.

Thus, the compliance officers serve as a "second line of defense" against unwholesome and improperly labeled meat and poultry.

Both the State and Federal agencies operate inspection programs within California. Responsibility for inspecting plants that sell all their meat or poultry products within

California rests with CDA's Bureau of Meat Inspection. USDA's Consumer and Marketing Service inspects those plants that do any interstate business.

The State's own meat inspection program is operated with the help of Federal funds and technical assistance. Since November 1969, the red meat part of the program has been certified by USDA as equal to Federal inspection. The poultry part is being further strengthened for a similar Federal certification.

In California, USDA has compliance offices in the San Francisco and Los Angeles areas. As a result of the work plan, one State compliance officer has joined the two USDA compliance officers in the San Francisco office, while two State compliance officers are sharing the Los Angeles area office with one USDA compliance man. A USDA compliance officer could eventually move in with the State's compliance office in Sacramento as well.

The compliance men spend a good part of their time on the road—attempting to prevent violations of Federal and State inspection laws, tracking them down when they do occur, conducting compliance reviews, and evaluating the meat and poultry inspection programs.

Irregularities might take the form of meat or poultry getting into marketing channels without being in-

spected; product bearing counterfeit inspection stamps or inaccurate labels, or product becoming adulterated, contaminated, or spoiled on its journey from the plant to the retail meat counter.

In many cases, owners voluntarily remove these products from food channels. When necessary, the compliance officers can detain suspect meat and poultry products.

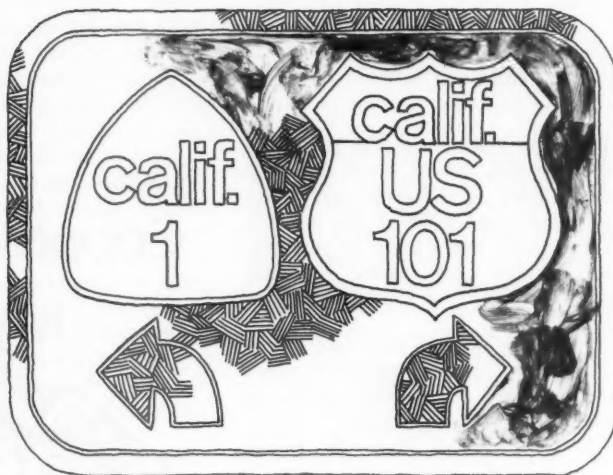
When products are detained, but still not properly disposed of, steps are taken to have them seized under a court order. The court then directs proper disposal.

While Federal and State compliance activities are, in many cases, conducted independently of one another—depending on which has jurisdiction—sometimes joint efforts are called for.

In all cases, closer coordination can prevent inappropriate or duplicate action and result in a greater exchange of information on potential or actual violations.

California consumers are the beneficiaries of this prototype Federal-State compliance program, which could be the forerunner of a national network of similar cooperative compliance programs. □

*The author is Director, Compliance and Evaluation Staff, Consumer Protection Programs, C&MS, USDA.*



**A**RCHITECTS AND BUILDERS, writers and publishers, doctors and nurses—they're partners in business.

Likewise, the U.S. Department of Agriculture's Consumer and Marketing Service and all 50 States are partners—partners in protection. Through Federal-State cooperation, our meat and poultry are inspected for wholesomeness to help make them the finest foods in the world.

Several laws make this cooperation possible. The best known and most encompassing laws are the Wholesome Meat and Poultry Products Inspection Acts. Under these Acts, C&MS is paying up to 50 percent of the cost of developing State inspection programs, in addition to providing technical help.

All 50 States completed Wholesome Meat Act agreements with USDA. This means each State can take advantage of Federal expertise in the meat inspection field. By March 1970, 19 States had entered into a cooperative agreement covering poultry inspection.

These agreements are completely voluntary. However, each State must have adequate intrastate inspection programs or plants selling products solely within the State will come under Federal inspection.

Another far-reaching program between USDA and the States comes under the Talmadge-Aiken agreements, which provide for State meat and poultry inspectors to perform Federal inspection in approved plants.

Before being granted inspection, each individual plant must first be surveyed and approved jointly by Federal and State officials. When inspection is granted, the plants are eligible to ship across State lines.

As of March, 32 States had completed such an agreement for red meat inspection, and 11 States had completed the poultry agreement. USDA and the States jointly share the cost of operating these programs.

USDA and the States have many opportunities to learn what each other is doing in meat and poultry inspection. USDA has training centers located around the country for both slaughter and processing operations. State and Federal inspectors attend these centers to learn how they both can do a better job.

Another way the States share in advancing inspection procedures is through the "employee interchange program." State people may come to Washington, D.C., to work with C&MS inspection technicians in reviewing facilities, equipment, and labeling proposals made by companies wanting Federal inspection. While in Washington, State employees are trained in sanitary controls of plant construction and equipment and the requirements

for product and label approvals.

A Federal employee may also be assigned to a State to provide advice in upgrading and further developing the State's meat or poultry inspection program. The Federal employee serves under the day-to-day supervision of the State agency, with technical back-up supervision of a C&MS regional office.

This phase of the interchange program can be more permanent with the Federal employee assigned to the State for up to two years. Hawaii, Connecticut, Massachusetts, Idaho, and Kansas have this type of program working now. The USDA expert still receives his usual salary, but the State reimburses the Federal government for his services.

In certain circumstances, a State may request to have a Federal meat or poultry expert head the State's inspection program during the period of formulating regulations and starting inspection services. (Missouri and Nebraska are doing this now.) State inspectors can be used in Federal plants and vice versa. The State also appoints a State Program Director who works along with the Federal official in a complete team effort.

The job of inspecting all of the Nation's meat and poultry is enormous and requires cooperation at all levels of government. It's not only the formal agreements between Federal and State governments that count, but also the overall attitude of cooperation. It is this full cooperation that is helping to bring a totally inspected supply of meat and poultry products one step closer. □

## **PARTNERS IN PROTECTION MAKE HEADWAY**

By Dr. George A. Martin

*The author is Assistant to the Deputy Administrator for Consumer Protection, C&MS, USDA.*

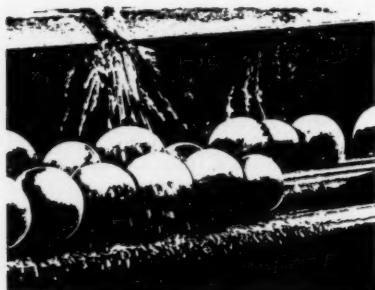


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### COVER STORY

Whether you squeeze your own oranges or buy frozen concentrated juice, you can get good-quality products. See pages 2-6.

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Editor, Bonnie W. Pok  
Editorial Assistant, M. Jane Phillips

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